

ENERGY MANAGEMENT AT TEXAS TECH



Growing energy footprint requires improved monitoring

Texas Tech University has big energy needs. The university has a growing student population exceeding 36,000 and a campus spanning 1,839 acres. To rein in its energy costs, Texas Tech turned to TDIndustries to tackle this challenge through smart data tracking technology.

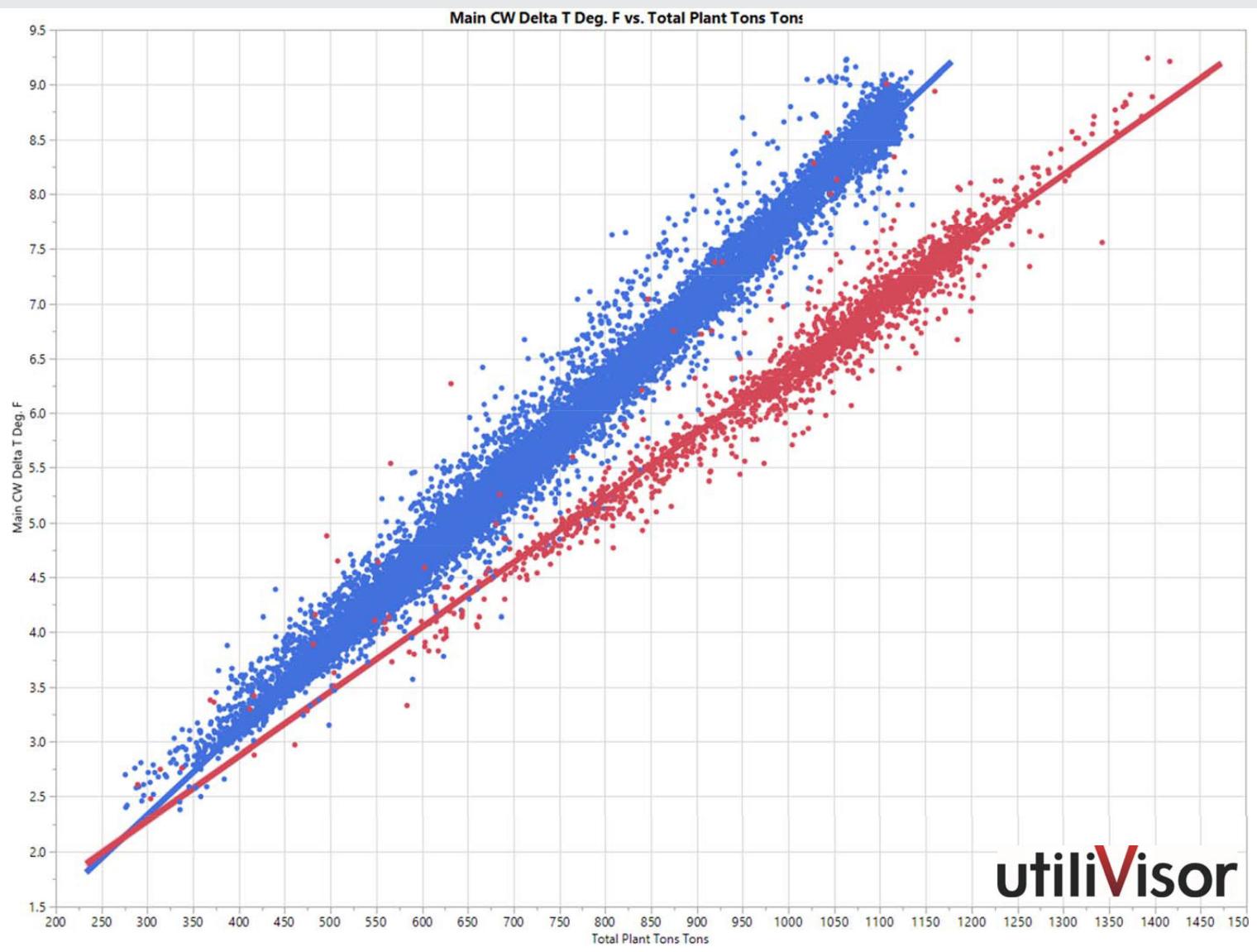
In 2000, Texas Tech began tracking its energy consumption in an effort to understand how and where energy was being used. Throughout the years, the university has developed a broad energy management program, which is aligned with Texas Government Code, Chapter 447.

In 2013, Texas Tech contracted with TDIndustries and utiliVisor, an energy management firm, to analyze the real-time operating data gathered from the various university energy plants and provide recommendations for energy efficiency. In 2017, TD began campus utility metering services, providing meter installation, monitoring and reporting for a wide range of energy sources including electricity, steam, steam condensate, chilled water, irrigation and domestic water.

TD works in partnership with Texas Tech's Building & Construction Department, which oversees the metering program, to identify upgrades or new meters needed on a building-by-building basis. TD installs the meters and runs the electrical supply and energy source to the meter. The meters are tied into data drops provided by Texas Tech. During a meter installation, the energy supply must be completely shut down, which requires close coordination with all affected departments to minimize any impacts to campus operations.

The TDIndustries Difference

- Metering installation, monitoring, and reporting for a wide variety of energy sources
- Smart data collection technology to understand and control energy consumption
- Dedicated Partners who take ownership of campus energy performance
- System troubleshooting to quickly identify issues with timely solutions
- Continuous quality service and access to specialty knowledge that would be too expensive to maintain internally



utiliVisor

TD uses utiliVisor software to analyze real-time operating data from Texas Tech's mechanical plants. Many of the reports are similar to this example, which compare the plant's efficiency against industry benchmarks.

Once the meter is complete, the meter is integrated into the utiliVisor database for data collection. Using the different views of this versatile, state-of-the-art system, TD provides regular reports on:

- Consumption per meter
- Consumption per building
- Consumption throughout the campus

In addition, TD closely monitors campuswide energy systems to alert the university of any usage spikes or trends that may indicate a potential problem or risk.

Texas Tech uses the collected information to balance the energy plant loads and integrate the data into its eSight Energy Accounting System. This specially designed system is used for campuswide monitoring and billing for non-educational buildings and common spaces, such as the student union. The information helps the university understand its energy consumption and costs and aids in

the development of new energy saving initiatives. Since 2000, Texas Tech's overall Energy Use Index (EUI), which tracks all energy used on campus, has shown a 37 percent decrease in energy usage, and from 2008 through 2018, the university reported \$18 million in energy savings and an 18 percent reduction in the university's overall carbon footprint. Through close monitoring and analysis of its energy consumption metrics, Texas Tech has significantly reduced its energy consumption while expanding campus facilities to meet the needs of the increasing student population. Today, Texas Tech is recognized as a leader in energy efficiency, providing mentorship and lessons learned for other universities.

TDIndustries is proud to support Texas Tech and work in partnership to provide innovative solutions to help meet their energy performance goals.

